

REMARKS

I. Amendments

Prior to this amendment, claims 10-22, 33-39, and 42-44 were pending and claims 10-22, 33, 43, and 44 were under examination. In the last Office Action dated July 14, 2006, the Office allowed claim 33, but rejected claims 10-22, 43, and 44.

By this amendment, Applicants request that claims 13-16, 19-22, and 34-44 be canceled without prejudice or disclaimer. Also, Applicants amend claim 10 by deleting part (D), by adding the conjunction "and" following part (B), and by changing "comprising" to "consisting of" as the proper Markush language. This amendment does not add new matter.

Applicants reserve the right to claim and prosecute in future applications the subject matter canceled herein. Claims 10-12, 17, 18, and 33 are now pending and under examination.

Applicants also amend the Specification by replacing the first paragraph following the heading, "CROSS-REFERENCE TO RELATED APPLICATIONS," so that the paragraph now reflects that Application No. 09/664,987 issued as U.S. Patent No. 6,803,214 on October 12, 2004.

II. Rejection under 35 U.S.C. § 112, first paragraph

In the Non-Final Office Action dated September 8, 2005, the Office rejected claims 10-14 and 16-22 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. (Non-Final Office Action, p. 2.) The Examiner stated that "[n]o information regarding the effects of such structural variation

or modification on the function of the polypeptide is set forth either in the specification or in the prior art. The relationship of structure of polypeptides to their function is and was insufficiently developed in the art to permit *a priori* knowledge of at least a representative sample of such variant structures that would retain the disclosed function." (Non-Final Office Action, p. 2-3.)

In Applicants' Reply to Office Action dated January 9, 2006, and Supplemental Amendment and Response dated April 21, 2006, Applicants traversed the Examiner's rejection and asserted that the specification did provide information regarding a representative sample of structural variations of the core+1 polypeptide and how these variants retained the disclosed function. (p. 11 and 12, respectively.) The specification describes five different variations of the core+1 polypeptide, namely Mut R1, Mut R2, Mut R3, Mut R4, and Mut R5. (Specification at page 47, lines 1-17.) Like the core+1 polypeptide, each of the variants of the core+1 polypeptide is expressed as a polypeptide and each variant polypeptide is detectable by Western analysis using HCV-positive human serum and monoclonal antibody against core protein. (Specification at page 47, lines 18-26; page 13, lines 3-16; and Substitute Sheet Fig. 8.)

The Office sustained the rejection in the Final Office Action dated July 14, 2006, and further rejected previously amended claim 15 and new claims 43 and 44 on the same grounds. (Final Office Acton, p. 2.) The Examiner stated that the five mutants described in the specification allegedly do "not constitute a representative sampling of protein variants." (Final Office Action, p. 3.)

By this Amendment, Applicants amend claim 10 by removing part (D), which refers to variants of core+1 polypeptide. Applicants also cancel claims 13-16, 19-22,

43, and 44. Amended claim 10 and claims 11, 12, 17, and 18 do not refer to variants of core+1 polypeptide, thereby obviating the Examiner's rejection. Applicants assert that the amendment to claim 10 and cancellation of claims 13-16, 19-22, 43, and 44 do not signify that Applicants agree with the Examiner's rejection. Further, Applicants do not intend to abandon the subject matter canceled by this Amendment and reserve the right to claim and prosecute the canceled subject matter in future applications.

Applicants respectfully request that the rejection under 35 U.S.C. § 112, first paragraph, be withdrawn.

III. Other rejections

In the Non-Final Office Action dated September 8, 2005, the Office set forth several rejections. Of these rejections, the Office, in its Final Action, maintained only the aforementioned rejection under 35 U.S.C. § 112, first paragraph. Applicants submit this Amendment assuming that the Office withdrew the rejections made in the September 8, 2005 Office Action but not mentioned in the Final Action.

IV. Conclusions

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 10-12, 17, 18, and 33 in condition for allowance. Applicants submit that the proposed amendment of claim 10 does not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

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Also, Applicants submit that the entry of the Amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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